



Physical activity and sports are important factors that can influence the menstrual cycle, both in terms of regularity and the characteristics of bleeding. Indeed, regular physical exercise has many benefits for reproductive health, but excessive or poorly adapted practice can also disrupt hormonal balance and lead to menstrual disorders.

The benefits of regular physical activity on the menstrual cycle are multiple. Firstly, exercise stimulates the production of endorphins, the "feel-good hormones", which help regulate mood and reduce stress. As we saw in the previous sub-module, chronic stress can interfere with the regulation of the hypothalamic-pituitary-ovarian axis and disrupt menstrual cyclicity. By practicing regular physical activity, we therefore promote better stress management and greater emotional stability, which can help regulate cycles.

In addition, physical exercise improves insulin sensitivity and promotes a healthy body composition, two important factors for hormonal balance. Indeed, insulin resistance and excess visceral fat are associated with an increased risk of polycystic ovary syndrome (PCOS) and ovulatory disorders. By practicing regular physical activity, we optimize the use of glucose by cells and prevent metabolic imbalances that can impact ovarian function.

Example: Sarah, 28, suffers from PCOS, which manifests as irregular cycles, infrequent ovulations, and overweight. Her gynecologist advises her to practice regular physical activity (30 minutes per day, 5 times per week) to improve her insulin sensitivity and promote progressive weight loss. After 3 months of an exercise program combining strength training and cardio, Sarah notices an improvement in the regularity of her cycles and a decrease in her hyperandrogenism symptoms (acne, hirsutism).

However, excessive or poorly adapted sports practice can also have negative impacts on the

menstrual cycle. High-level athletes, particularly in endurance sports (running, cycling) or weight categories (gymnastics, figure skating), are particularly at risk of developing menstrual disorders. The "female athlete triad" is a well-known syndrome that associates eating disorders, amenorrhea (absence of periods), and early osteoporosis.

These disturbances are related to an imbalance between energy inputs (food) and expenditures (intensive training), resulting in chronic energy deficit. This deficit is perceived by the body as a sign of "famine", triggering an adaptive response by the hypothalamic-pituitary-ovarian axis to preserve energy resources. The pulsatile secretion of GnRH is then inhibited, leading to a decrease in the production of FSH and LH, and therefore a halt in follicular maturation and ovulation.

Anecdote: Julie, 20, is a high-level gymnast who trains more than 20 hours a week. For several months, she has had no periods and feels very tired. Concerned, she consults her doctor who diagnoses her with functional hypothalamic amenorrhea, related to a chronic energy deficit. He advises her to temporarily reduce her training volume and work with a sports dietitian to balance her nutritional intake. After several months of multidisciplinary management, Julie's cycles gradually recover.

It is important to note that even moderate sports practice can sometimes lead to cycle disruptions, especially in women with low energy reserves or a history of eating disorders. High-impact sports (running, jumping) can also increase the risk of dysmenorrhea (painful periods) due to repeated microtraumas on the pelvic organs.

Example: Marie, 35, is an amateur jogger who runs 3 times a week to keep fit. Since she increased her training volume to prepare for a half-marathon, she has noticed that her periods are more painful and accompanied by spotting (bleeding between periods). After discussing it with her gynecologist, she decides to temporarily reduce her mileage and alternate with low-impact activities (swimming, biking) to alleviate her symptoms.

In summary, regular physical activity has many benefits for reproductive health and can help regulate the menstrual cycle, by reducing stress, improving insulin sensitivity, and promoting a healthy body composition. However, excessive or poorly adapted sports practice can also disrupt the hormonal balance and cause menstrual disorders, particularly in high-level athletes or women with low energy reserves. It is therefore important to find the right balance between the benefits and potential risks of exercise, adapting sports practice to individual needs and overall health status. In case of persistent menstrual disturbances or doubt about the impact of one's physical activity on one's cycle, it is recommended to consult a health professional (gynecologist, sports doctor) for personalized support and appropriate care.

Key points to remember:

- Regular physical activity has many benefits for reproductive health and can help regulate the menstrual cycle by reducing stress, improving insulin sensitivity and promoting a healthy body composition.
- Excessive or poorly adapted sports practice can disrupt the hormonal balance and cause menstrual disorders, especially in high-level athletes or women with low energy reserves.
- The "female athlete triad" is a syndrome associating eating disorders, amenorrhea and early osteoporosis, related to a chronic energy deficit.
- Even moderate sports practice can sometimes lead to cycle disruptions, especially painful periods due to repeated microtraumas on the pelvic organs.
- It is important to find the right balance between the benefits and potential risks of exercise, adapting sports practice to individual needs and overall health status.
- In case of persistent menstrual disturbances or doubt about the impact of one's physical activity on one's cycle, it is recommended to consult a health professional for personalized support and appropriate care.